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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,505	04/02/2001	Makoto Horiuchi	5077-000027	3633

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EXAMINER

LEON, EDWIN A

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 12/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,505

Applicant(s)

HORIUCHI ET AL.

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 2, 6-11 and 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 12 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7, 8, 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

.DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species II (Claims 1, 3-5, 12, and 16-22) in Paper No. 12 is acknowledged.

Drawings

2. Figures 21A-22B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-5, 12, 16, and 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Feldman et al. (U.S. Patent No. 5,430,353). With regard to Claim 1, Feldman et al. discloses a discharge lamp comprising: a luminous bulb (10) in which a luminous material is enclosed and a pair of electrodes (32,34) are opposed in the luminous bulb (10); and a pair of sealing portions (12a,12b) for sealing a pair of metal foils (20c,22c) electrically connected to the pair of electrodes (32,34), respectively; wherein at least one of the pair of metal foils (20c,22c) has a twist structure. See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

With regard to Claims 3 and 19-21, Feldman et al. discloses a discharge lamp comprising: a luminous bulb (10) in which a luminous material is enclosed and a pair of electrodes (32,34) are opposed in the luminous bulb (10); and a pair of sealing portions (12a,12b) for sealing a pair of metal foils (20c,22c) electrically connected to the pair of electrodes (32,34), respectively; wherein each of the pair of metal foils (20c,22c) has an external lead (20a-b,22a-b) on a side opposite to a side electrically connected to a corresponding electrode (32,34) of the pair of electrodes (32,34), at least one of the pair of metal foils (20c,22c) has a corrugated structure (Fig. 3) in which the metal foils (20c,22c) are corrugated along a longitudinal direction of the metal foils (20c,22c), and the metal foil (20c,22c) having the corrugated structure (Fig. 3) has at least one wave portion (Fig. 3) in an area between an end of the electrode (32,34) and an end of the external lead (20a-b,22a-b) of the metal foil (20c,22c). The method limitations are deemed inherent. See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

With regard to Claim 4, Feldman et al. discloses at least one wave crest (36) of the wave portion (Fig. 3) being provided in an area on the luminous bulb (10) side from a midpoint of the metal foil (20c,22c) in the longitudinal direction of the metal foil (20c,22c) (including the midpoint). See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

With regard to Claim 5, Feldman et al. discloses a plurality of wave crests (Fig. 3) of the wave portion (Fig. 3) being provided in an area between the end of the electrode (32,34) and the end of the external lead (20a-b,22a-b) of the metal foil (20c,22c). See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

With regard to Claims 12 and 22, Feldman et al. discloses each of the pair of metal foils (20c,22c) being tightly attached to a glass portion extending from the luminous bulb (10), and each of the pair of metal foils (20c,22c) is a molybdenum foil. The method limitations are deemed inherent. See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

With regard to Claim 16, Feldman et al. discloses each of the pair of sealing portions (12a, 12b) having a shrink seal structure. See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

With regard to Claim 18, Feldman et al. discloses a reflecting mirror (Column 4, Lines 17-34) for reflecting light emitted from the discharge lamp. See Figs. 1-5, Column 4, Lines 17-34 and Column 5, Lines 20-34.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. Patent No. 5,430,353) in view of Applicant's admitted prior art. Feldman et al. discloses the claimed invention except for the luminous material comprising at least mercury.

Applicant's admitted prior art discloses the use of mercury as a luminous material. See Page 2, Lines 1-6.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the discharge lamp of Feldman et al. by using mercury as a luminous material as taught in Applicant's admitted prior art in order to improve the luminescent capabilities of the lamp.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Noteleteirs (U.S. Patent No. 5,387,840), Ooms (U.S. Patent No.

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4,849,669), Kameya et al. (U.S. Patent No. 5,128,588), Ekkelboom et al. (U.S. Patent No. 5,159,239), and Rao (U.S. Patent No. 5,241,239) discloses discharge lamps having lead (20a-b,22a-b)s and foils with twisted structures.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Edwin A. Leon
AU 2833


P. AUSTIN BRADLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

EAL
December 9, 2002